TECHNICAL COMMITTEE: Railroad / Light Rail Transit Technical Committee

TOPIC: Active devices at highway-LRT grade crossings

STATUS/DATE OF ACTION:

TC Drafts: 06/21/2012
RRLRT TC Approval: 06/21/2012
Transmitted to Sponsors: 09/08/2012
Council Approval: 01/11/2013

ORIGIN OF REQUEST: RR/LRT TC

AFFECTED SECTIONS OF MUTCD: 8C.03 Change, 8C.05 Change

SUMMARY:
The purpose of these changes is to combine and simplify Sections 8C.03 and 8C.05. Treatment of pedestrians at LRT grade crossings is being addressed under proposed changes to Part 8D. The only significant change is to increase the LRT speed at which automatic gates are required from 35 mph to 40 mph. This change was made based on the safety experience of modern LRT systems in the US and Europe.

DISCUSSION:
The proposed changes have been reviewed by the RR/LRT TC. It is recommended that the proposed changes be sent for sponsor comment.

RECOMMENDED CHANGES TO THE MUTCD:
Note: Existing MUTCD text to be deleted is shown in double-strikethrough red. New text to be added is shown in underline blue.

Changes made on 01/09/2013 based on sponsor comment are shown in yellow highlight.

### Existing Section 8C.03:

#### Section 8C.03 Flashing-Light Signals at Highway-LRT Grade Crossings

**Support:**

01 Section 8C.02 contains additional provisions regarding the design and operation of flashing-light signals, including those installed at highway-LRT grade crossings.

**Standard:**

02 Highway-LRT grade crossings in semi-exclusive alignments shall be equipped with flashing-light signals where LRT speeds exceed 35 mph. Flashing-light signals shall be clearly visible to motorists, pedestrians, and bicyclists.

03 If flashing-light signals are in operation at a highway-LRT crossing that is used by pedestrians, bicyclists, and/or other non-motorized road users, an audible device such as a bell shall also be provided and shall be operated in conjunction with the flashing-light signals.

**Guidance:**

04 Where the crossing is at a location other than an intersection and LRT speeds exceed 25 mph, flashing-light signals should be installed.

**Option:**

05 Traffic control signals may be used instead of flashing-light signals at highway-LRT grade crossings within highway-highway intersections where LRT speeds do not exceed 35 mph. Traffic control signals or flashing-light signals may be used where the roadway is a low-volume street where prevailing speeds do not exceed 25 mph.

### Existing Section 8C.05

#### Section 8C.05 Use of Automatic Gates at LRT Grade Crossings

**Guidance:**

01 Highway-LRT grade crossings in semi-exclusive alignments should be equipped with automatic gates and flashing-light signals (see Sections 8C.02 and 8C.03) where LRT speeds exceed 35 mph.

**Option:**

02 Where a highway-LRT grade crossing is at a location other than an intersection, where LRT speeds exceed 25 mph, automatic gates and flashing-light signals may be installed.

03 Traffic control signals may be used instead of automatic gates at highway-LRT grade crossings within highway-highway intersections where LRT speeds do not exceed 35 mph. Traffic control signals or flashing-light signals without automatic gates may be
used where the crossing is at a location other than an intersection and where LRT speeds do not exceed 25 mph and the roadway is a low-volume street where prevailing speeds do not exceed 25 mph.

Revised Section 8C.05:

Section 8C.05 Use of Active Devices at Highway-LRT Grade Crossings

Support:

1. Active devices include activated signs, traffic control signals, active grade crossing warning systems, or any combination thereof.

Where LRT speed is cited in this Part, it refers to the maximum speed at which LRT equipment is permitted to traverse a particular grade crossing.

2. Sections 8C.02 and 8C.04 contain additional provisions regarding the design and operation of flashing-light signals and automatic gates.

Guidance:

3. At highway-LRT grade crossings where LRT operating speeds are 25 mph or less, active devices should be used unless an engineering study indicates that the use of Crossbuck Assemblies, STOP signs alone, or YIELD signs alone would be adequate.

Standard:

4. At highway-LRT grade crossings where LRT operating speeds exceed 25 mph, active devices shall be used.

5. At highway-LRT grade crossings where LRT operating speeds exceed 40 mph, automatic gates shall be used.

Guidance:

6. Traffic control signals alone should not be used where the LRT grade crossing is at a location other than an intersection and LRT operating speeds exceed 20 mph.

Editorial – Renumber Part 8C accordingly.

DISCUSSION IN RESPONSE TO SPONSOR COMMENTS:

VOTE: For: Unanimous

Opposed: None

Abstentions: None

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